

In the claims:

1. (Currently amended) In an image system, a method for controlling a relative movement between a substrate being exposed and a head of the image system, the method comprising:

moving the head relative to the substrate at a relatively fast speed while exposing a first portion of the substrate; and

moving the head relative to the substrate at a relatively slow speed while exposing a second portion of the substrate; and

providing an image to the head of the image system at a variable rate responsive to changes in the moving speeds;

wherein the exposing of the first and second portions of the substrate occur during a first pass.

2. (Original) The method of claim 1 further comprising:

upon completion of the first pass, rotating the substrate relative to the head; and

moving the head relative to the substrate while exposing a third portion of the substrate.

3. (Original) The method of claim 1 further comprising:

moving the head relative to the substrate at a speed between the relatively slow speed and the relatively fast speed while exposing a third portion of the substrate;

wherein the exposing of the first, second, and third portions of the substrate occur during a first pass.

4. (Original) The method of claim 1 wherein the movement moves a scan line for undertaking a scanning exposure of the substrate.

5. (Original) The method of claim 4 wherein the image system is a digital photolithography system.

6. (Cancel) A method for performing digital photolithography on a substrate, the substrate having a first portion with a first design resolution and a second portion with a second design resolution, the method comprising:

scanning the first portion of the substrate at a first speed; and

scanning the second portion of the substrate at a second speed different from the first; wherein both the first and second portions are scanned on a single pass.

7. (Original) ~~The method of claim 6 wherein the step of scanning the first portion comprises: A method for performing digital photolithography on a substrate, the substrate having a first portion with a first design resolution and a second portion with a second design resolution, the method comprising:~~

scanning the first portion of the substrate at a first speed, comprising moving the substrate relative to the head at a third speed in a first direction; and moving the head relative to the substrate at a fourth speed in the first direction while scanning the first portion of the substrate, wherein the first speed equals the sum of the third and fourth speeds; and

scanning the second portion of the substrate at a second speed different from the first speed, comprising ~~wherein the step of scanning the second portion comprises:~~ moving the head relative to the substrate at a fifth speed in a second direction opposite to the first direction while scanning the second portion of the substrate, wherein the second speed equals the difference of the third and fifth speeds;

wherein both the first and second portions are scanned on a single pass.

8. (Original) The method of claim 7 wherein the fourth and fifth speeds are the same.

9. (Original) The method of claim 6 wherein the substrate has a third portion with the first design resolution, the method further comprising:

rotating the substrate relative to a pixel panel of the digital photolithography system;
scanning the third portion of the substrate at the first speed on a separate pass.

10. (Original) The method of claim 9 wherein the first, second, and third portions are different portions of the substrate.

11. (Original) Software for controlling the movement of a first motor for moving an image producing device during exposure of a substrate, wherein the substrate includes a plurality of circuit components arranged in rows and at least one horizontal component between consecutive rows of the circuit components, the software comprising instructions for:

moving the image producing device at a first speed and in a first direction while exposing the at least one horizontal component; and

moving the image producing device at a second speed and in a second direction opposite from the first direction while exposing the plurality of circuit components;

wherein the substrate constantly moves at a third speed in the first direction during the exposing, and the third speed is greater than the second speed.

12. (Original) The software of claim 11 wherein the first speed equals the second speed and the first direction is perpendicular to the rows.

13. (Original) The software of claim 11 wherein the first speed equals zero.

14. (Original) The software of claim 11 further comprising instructions for: providing digital data to the image producing device corresponding to the movement of the image producing device at the first and second speeds.

15. (Original) The software of claim 11 wherein the image producing device is a deformable mirror device (DMD).

16. (Currently Amended.) A digital photolithography system for exposing first and second portions of a substrate in a single pass, the system comprising:

a pixel panel;

means for moving the pixel panel relative to a substrate at a relatively fast speed and modifying the pixel panel at a relatively fast rate while exposing the first portion of the substrate; and

means for moving the pixel panel relative to the substrate at a relatively slow speed and modifying the pixel panel at a relatively slow rate while exposing the second portion of the substrate.

17. (Original) The digital photolithography system of claim 16 wherein the pixel panel is a deformable mirror device (DMD).

18. (Original) The digital photolithography system of claim 16 further comprising:

means for supplying data to the pixel panel while the pixel panel is being moved relative to the substrate, wherein a rate at which the data is supplied corresponds to the speed at which the pixel panel is being moved relative to the substrate.